Bruhat Bangalore Mahanagara Palike

Executive Engineer

Bytarayanapura Division

QUALITY REPORT

(8th & Part Bill)

(Annexure-2)

Name of Work : PACKAGE NO-6 (CONSIST OF 14 WORKS)

Est. Cost: 1500.00 LAKHS
Job Code: 009-23-000003

MECADEZ
Insight Makes It Happen

Mecadez Core Technologies Private limited

Project Management Consultancy Services

Registered Office: No.80, Aniketana, 14th 'B' Main, West of Chord Road, 2nd Stage, 2nd Phase, Mahalakshmipuram, Bengaluru-560086
Ph: - +91-9538136111 +91-9483561234
E-mail: mecadez@gmail.com

Mecadez Core Technologies Private Limited

Project Management Consultancy Services

Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: **Package No.06 Consists of 14 Works**

Job No: **MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR**

Contractor **M/s SMLP Aspahalts**

Sl. No	Particulars of the Tests	Bituminous Concrete (BC)			
		Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
1	Quality of Binder	69.73	2 Test / lot	2	2
2	Rate of Spread of Tack Coat/ Prime Coat		3 Test / Day	3	3
3	Aggregate Impact Value		1 Test / 350 m^3	1	1
4	Combined Flakiness & Elongation Indices		1 Test / 350 m^3	1	1
5	Aggregate Stripping Value		1Test / Source of Supply	1	1
6	Specific Gravity & Water Absorption of Aggregates		1Test / Source of Supply	1	1
7	Aggregate gradation		2 Test / day	2	2
8	Marshal Stability of the Mix		1 Test/400 tonnes (Min. 2 Test)	2	2
9	Binder content and Mix Gradation		1 Test/400 tonnes (Min. 2 Test)	2	2

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900.

Mecadez Core Technologies Private Limited MECADEZ

Consultant

Contractor

ASSISTANT ENGINEER

ASSISTANT EXE ENGINEER

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Quality of Bitumen

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 73 – 2013 (Paving Bitumen) & Specification for Road & Bridge Works, MORT&H, Revision V.
Grade of Bitumen	VG30
Location	Hot Mix Plant
Material	Bitumen
Sample No	1
Sample Collection Date	1-Apr-2023
Tested Date	2-Apr-2023

Sl. No.	Description	Test Results	Requirement as per IS:73-2013
1	Penetration at 25^{0}C , 1 / 10 mm	47	Min. 45
2	Softening Point, (^{0}C)	51	Min. 47
3	Specific Gravity	0.99	Min. 0.97
4	Ductility at 27^{0}C, in cm	49	Min. 40
5	Flash Point, (^{0}C)	222	Min. 220

Note:

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iv. Any query regarding the report must be reported immediately.

For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Quality of Bitumen

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 73 – 2013 (Paving Bitumen) & Specification for Road & Bridge Works, MORT&H, Revision V.
Grade of Bitumen	VG30
Location	Hot Mix Plant
Material	Bitumen
Sample No	2
Sample Collection Date	1-Apr-2023
Tested Date	2-Apr-2023

Sl. No.	Description	Test Results	Requirement as per IS:73-2013
1	Penetration at 25^0C , 1 / 10 mm	53	Min. 45
2	Softening Point, (^{0}C)	48	Min. 47
3	Specific Gravity	0.99	Min. 0.97
4	Ductility at 27^0C, in cm	50	Min. 40
5	Flash Point, (^{0}C)	225	Min. 220

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Rate of Spread of Tack Coat

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Location	At Site
Material	Bitumen (Tack Coat)
Sample No	1
Tested Date	7-Apr-2023

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.641	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.652	1.653	1.65
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.011	0.012	0.009
6	Rate of spread (d/a)	kg / m^2	0.275	0.3	0.225
7	Average	kg / m^2	0.267		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Tack Coat is: 0.267 kg / m2

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Rate of Spread of Tack Coat

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Location	At Site
Material	Bitumen (Tack Coat)
Sample No	2
Tested Date	7-Apr-2023

Sl. No.	Determination	Unit	Test No 2		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.641	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.651	1.653	1.652
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.01	0.012	0.011
6	Rate of spread (d/a)	kg / m^2	0.25	0.3	0.275
7	Average	kg / m^2	0.275		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Tack Coat is: 0.275 kg / m2

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Rate of Spread of Tack Coat

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Location	At Site
Material	Bitumen (Tack Coat)
Sample No	3
Tested Date	7-Apr-2023

Sl. No.	Determination	Unit	Test No 3		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.641	1.641	1.641
4	Final weight of plate after application of Tack Coat (c)	kg	1.653	1.65	1.651
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.012	0.009	0.01
6	Rate of spread (d/a)	kg / m^2	0.3	0.225	0.25
7	Average	kg / m^2	0.258		
8	Specified Limit	kg / m^2	Not less than 0.25 kg / m^2		

Results: Rate of Spread of Tack Coat is: 0.258 kg / m2

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For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Impact Value

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Coarse Aggregate
Sample No	1
Sample Collection Date	1-Apr-2023
Tesed Date	6-Apr-2023

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1394	1386
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	434	426
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	90	91
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	344	335
6	Aggregate Impact Value (w4 / w3)x100	%	20.74	21.36
7	Specified Limit	%	24	

Results: Average Aggregate Impact Value: **21.05** %

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Particle Shape

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Coarse Aggregates
Sample No	1
Sample Collection Date	1-Apr-2023
Teested Date	6-Apr-2023

I.S. Sieves Size		Weight of Retained Sample on Each Sieve (minimum 200 Pieces) (gm)	Flakiness Index		Elongation Index	
Passing through IS Sieves (mm)	Retained on IS Sieves (mm)		Thickness Gauge	Weight of Aggregates in each fraction passing on thickness gauges (gm)	Length Gauge	Weight of Aggregates in Fraction retained on length gauges (gm)
63	50	0	33.9	0	-	0
50	40	0	27	0	81	0
40	25	0	19.5	0	58.5	0
31.5	25	0	16.95	0	-	0
25	20	1596.34	13.5	276.34	40.5	294.34
20	16	1387.36	10.8	66.36	32.4	93.36
16	12.5	981.61	8.55	176.61	25.6	183.61
12.5	10	510.23	6.75	112.23	20.2	118.23
10	6.3	281.65	4.89	103.65	14.7	110.65
	SW	4757.19	SWf	735.19	SWe	800.19

Flakiness Index 15.45 %
Elongation Index 16.82 %
Combined Flakiness and Elongation Indices : 32.27 %

Comments: Maximum allowable Combined Flakiness and Elongation Indices for Bituminous Concrete is 35%.

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For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Stripping Value

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 6241 - 1971 & Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Coarse Aggregates / Bitumen
Sample No	1
Tesed Date	2-Apr-2023
Type of Aggregate	Coarse Aggregate
Type of Binder	60 / 70 Grade
Percentage of Binder Used	5% by weight
Total weight of Aggregate	200 gms
Total weight of Binder	10 gms
Temperature of water bath	40^0C

Observation Number	Stripping Percentage	Average Percentage	Average Retained Coating (%)
1	3.5	3.37	96.63
2	3.4		
3	3.2		

Comments: Minimum allowable Aggregate Stripping Value for Bituminous Concrete is 95%

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report

Specific Gravity and Water Absorption

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS: 2386 (Part - 111) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Coarse Aggregates
Sample No	1
Sapmle Collection Date	1-Apr-2023
Tested Date	2-Apr-2023

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of Empty Basket Immersed in Water	W_1 g	761	763	
2	Wt of Basket Filled with Aggregates Immersed in water	W_2g	2069	2046	
3	Weight of Saturated Aggregate in water	W_sg = W_2- W_1	1308	1283	
4	Weight of saturated surface dry aggregate in Air	W_3 g	2104	2071	
5	Weight of water equal to the Volume of the Aggregate	W_3- W_s	796	788	
6	Weight of Oven dried Aggregate	W_4g	2066	2040	
7	Specific Gravity	W_4/(W_3- W_s)	2.60	2.59	2.59
8	Apparent Specific Gravity	W_4/(W_4- W_s)	2.73	2.69	2.71
9	Water Absorption	(W_4- W_3)*100/ W_4	1.84	1.52	1.68

Comments: Maximum allowable Aggregate Water Absorption value for Bituminous Concrete is 2.0%.

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For Mecadez Core Technologies Private Limited

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Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Coarse Aggregates
Sample No	1
Sample Collection Date	1-Apr-2023
Tested Date	6-Apr-2023

Weight of Sample: 4000 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Grade ll Specification for Bituminous Concrete
2	13.20	173.26	4.33	4.33	95.67	90-100	
3	9.50	608.35	15.21	19.54	80.46	70-88	
4	4.75	720.36	18.01	37.55	62.45	53-71	
5	2.36	520.46	13.01	50.56	49.44	42-58	
6	1.18	359.36	8.98	59.54	40.46	34-48	
7	0.60	326.79	8.17	67.71	32.29	26-38	
8	0.30	351.37	8.78	76.50	23.50	18-28	
9	0.15	268.49	6.71	83.21	16.79	12-20	
10	0.075	392.89	9.82	93.03	6.97	4-10	

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Hot Mix Plant
Material	Coarse Aggregates
Sample No	2
Sample Collection Date	1-Apr-2023
Tested Date	6-Apr-2023

Weight of Sample: 4000 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	179.46	4.49	4.49	95.51	90-100	
3	9.50	609.36	15.23	19.72	80.28	70-88	
4	4.75	723.46	18.09	37.81	62.19	53-71	
5	2.36	526.89	13.17	50.98	49.02	42-58	
6	1.18	364.89	9.12	60.10	39.90	34-48	
7	0.60	338.26	8.46	68.56	31.44	26-38	
8	0.30	354.37	8.86	77.42	22.58	18-28	
9	0.15	271.49	6.79	84.20	15.80	12-20	
10	0.075	396.89	9.92	94.13	5.87	4-10	

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Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Stability of Mix

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Bituminous Concrete mix
Sample No	1
Tesed Date	7-Apr-2023

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	9.5	9 KN (min)
2	Marshal Flow	mm	3.3	2 – 4 mm
3	Percent of Air Voids in mix	%	4.6	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	68	65 – 75 %
5	Density	g/cc	2.32	-

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Stability of Mix

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Bituminous Concrete mix
Sample No	2
Tesed Date	7-Apr-2023

Sl. No.	Description	Unit	Test 2	Requirements as per MORT&H
1	Marshal Stability	KN	9.7	9 KN (min)
2	Marshal Flow	mm	3.2	2 – 4 mm
3	Percent of Air Voids in mix	%	4.2	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	70	65 – 75 %
5	Density	g/cc	2.32	-

Note:

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Bituminous Concrete mix
Sample No	1
Tesed Date	7-Apr-2023

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1903
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	823
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1859
5	Weight of Sample after extraction (i.e. washed aggregates)	gm	$S_a = w_{sa} - Eb$	779
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	44
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b + F_d$	46
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.59

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19	0	0	0	100.00	100	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.2	40.26	5.17	5.17	94.83	90-100	
3	9.5	131.25	16.85	22.02	77.98	70-88	
4	4.75	136.26	17.49	39.51	60.49	53-71	
5	2.36	95.69	12.28	51.79	48.21	42-58	
6	1.18	78.36	10.06	61.85	38.15	34-48	
7	0.6	64.25	8.25	70.10	29.90	26-38	
8	0.3	73.36	9.42	79.52	20.48	18-28	
9	0.15	53.69	6.89	86.41	13.59	12-20	
10	0.075	61.27	7.87	94.27	5.73	4-10	

For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Bituminous Concrete mix
Sample No	2
Tesed Date	7-Apr-2023

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1900
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	820
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1857
5	Weight of Sample after extraction (i.e. washed	gm	$S_a = w_{sa} - Eb$	777
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	43
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_{b+} F_d$	45
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.49

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.2	42.36	5.45	5.45	94.55	90-100	
3	9.5	106.36	13.69	19.14	80.86	70-88	
4	4.75	142.36	18.32	37.46	62.54	53-71	
5	2.36	82.36	10.60	48.06	51.94	42-58	
6	1.18	91.45	11.77	59.83	40.17	34-48	
7	0.6	61.36	7.90	67.73	32.27	26-38	
8	0.3	58.36	7.51	75.24	24.76	18-28	
9	0.15	46.25	5.95	81.19	18.81	12-20	
10	0.075	78.51	10.10	91.30	8.70	4-10	

For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Mecadez Core Technologies Private Limited

Project Management Consultancy Services
Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: **Package No.06 Consists of 14 Works**

Job No: **MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR**

Contractor **M/s SMLP Aspahalts**

Sl. No	Particulars of the Tests	Dense Graded Bituminous Macadam (DBM)			
		Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
1	Quality of Binder	47.75	2 Test / lot	2	2
2	Aggregate Impact Value		1 Test / 350 m^3	1	1
3	Combined Flakiness & Elongation		1 Test / 350 m^3	1	1
4	Aggregate Stripping Value		1Test / Source of Supply	1	1
5	Specific Gravity & Water Absorption of		1Test / Source of	1	1
6	Aggregate gradation		2 Test / day	2	2
7	Marshal Stability of the Mix		1 Test/400 tonnes (Min.2 Test)	2	2
8	Binder content and Mix Gradation		1 Test/400 tonnes (Min.2 Test)	2	2

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900

Consultant

Contractor

ASSISTANT ENGINEER

ASSISTANT EXE ENGINEER

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Quality of Bitumen

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 73 – 2013 (Paving Bitumen) & Specification for Road & Bridge Works, MORT&H, Revision V.
Grade of Bitumen	VG30
Location	Hot Mix Plant
Material	Bitumen
Sample No	1
Sample Collection Date	31-Mar-2023
Tested Date	1-Apr-2023

Sl. No.	Description	Test Results	Requirement as per IS:73 - 2013
1	Penetration at 25^0C , 1 / 10 mm	49	Min. 45
2	Softening Point, (^{0}C)	51	Min. 47
3	Specific Gravity	1.1	Min. 0.97
4	Ductility at 27^0C, in cm	45	Min. 40
5	Flash Point, (^{0}C)	223	Min. 220

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Quality of Bitumen

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 73 – 2013 (Paving Bitumen) & Specification for Road & Bridge Works, MORT&H, Revision V.
Grade of Bitumen	VG30
Location	Hot Mix Plant
Material	Bitumen
Sample No	2
Sample Collection Date	31-Mar-2023
Tested Date	1-Apr-2023

Sl. No.	Description	Test Results	Requirement as per IS:73 - 2013
1	Penetration at 25^{0}C , 1 / 10 mm	52	Min. 45
2	Softening Point, (^{0}C)	53	Min. 47
3	Specific Gravity	1.1	Min. 0.97
4	Ductility at 27^{0}C, in cm	44	Min. 40
5	Flash Point, (^{0}C)	228	Min. 220

Note:

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For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Impact Value

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Aggregate
Sample No	1
Sample Collection Date	31-Mar-2023
Tested Date	3-Apr-2023

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1338	1335
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	378	375
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	91	90
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	287	285
6	Aggregate Impact Value (w4 / w3)x100	%	24.07	24.00
7	Specified Limit	%	27	

Results: Average Aggregate Impact Value: **24.04** %

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Particle Shape

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Aggregates
Sample No	1
Sample Collection Date	31-Mar-2023
Tested Date	3-Apr-2023

I.S. Sieves Size		Weight of Retained Sample on Each Sieve (minimum 200 Pieces) (gm)	Flakiness Index		Elongation Index	
Passing through IS Sieves (mm)	Retained on IS Sieves (mm)		Thickness Gauge	Weight of Aggregates in each fraction passing on thickness gauges (gm)	Length Gauge	Weight of Aggregates in Fraction retained on length gauges (gm)
63	50	0	33.9	0	-	0
50	40	0	27	0	81	0
40	25	0	19.5	0	58.5	0
31.5	25	0	16.95	0	-	0
25	20	1432.94	13.5	112.94	40.5	130.94
20	16	1583.64	10.8	262.64	32.4	289.64
16	12.5	849.61	8.55	44.61	25.6	51.61
12.5	10	480.26	6.75	82.26	20.2	88.26
10	6.3	250.76	4.89	72.76	14.7	79.76
	SW	4597.21	SWf	575.21	SWe	640.21

Flakiness Index 12.83 %
Elongation Index 14.28 %
Combined Flakiness and Elongation Indices : 27.12 %

Comments: Maximum allowable Combined Flakiness and Elongation Indices for DBM is 35%.

Note:
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For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Stripping Value

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 6241 - 1971 & Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Material	Aggregates / Bitumen
Sample No	1
Tested Date	1-Apr-2023
Type of Aggregate	Coarse Aggregate
Type of Binder	Coarse Aggregate
Percentage of Binder Used	5% by weight
Total weight of Aggregate	200 gms
Total weight of Binder	10 gms
Temperature of water bath	40^0C

Observation Number	Stripping Percentage	Average Percentage	Average Retained Coating (%)
1	3.4	3.5	96.5
2	3.6		
3	3.5		

Comments: Minimum allowable Aggregate Stripping Value for Dense Bituminous Macadam is 95%

Note:
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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report

Specific Gravity and Water Absorption

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS: 2386 (Part - 111) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Laboratory
Material	Aggregates
Sample No	1
Sample Collection Date	31-Mar-2023
Tested Date	1-Apr-2023

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of Empty Basket Immersed in Water	W_1 g	761	763	
2	Wt of Basket Filled with Aggregates Immersed in water	W_2g	2045	2061	
3	Weight of Saturated Aggregate in water	$W_s g = W_2 - W_1$	1284	1298	
4	Weight of saturated surface dry aggregate in Air	W_3 g	2080	2086	
5	Weight of water equal to the Volume of the Aggregate	$W_3 - W_s$	796	788	
6	Weight of Oven dried Aggregate	W_4g	2045	2049	
7	Specific Gravity	$W_4/(W_3 - W_s)$	2.57	2.60	2.58
8	Apparent Specific Gravity	$W_4/(W_4 - W_s)$	2.69	2.73	2.71
9	Water Absorption	$(W_4 - W_3)*100/W_4$	1.71	1.81	1.76

Comments: Maximum allowable Aggregate Water Absorption value for Dense bituminous Macadam is 2.0%.

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Plant
Material	Aggregates
Sample No	1
Sample Collection Date	31-Mar-2023
Tested Date	3-Apr-2023

Weight of Sample: 10950 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	37.5	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Specification for Dense graded Bituminous Macadam
2	26.5	489.36	4.47	4.47	95.53	90-100	
3	19	1456.26	13.30	17.77	82.23	71-95	
4	13.2	1570.64	14.34	32.11	67.89	56-80	
5	4.75	2205.36	20.14	52.25	47.75	38-54	
6	2.36	1478.65	13.50	65.76	34.24	28-42	
7	0.3	2157.34	19.70	85.46	14.54	7-21	
8	0.075	1123.36	10.26	95.72	4.28	2-8	

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Aggregate Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Plant
Material	Aggregates
Sample No	2
Sample Collection Date	31-Mar-2023
Tested Date	3-Apr-2023

Weight of Sample: 10890 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	37.5	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Specification for Dense graded Bituminous Macadam
2	26.5	509.36	4.68	4.68	95.32	90-100	
3	19	1478.36	13.58	18.25	81.75	71-95	
4	13.2	1590.36	14.60	32.86	67.14	56-80	
5	4.75	2223.36	20.42	53.27	46.73	38-54	
6	2.36	1498.65	13.76	67.03	32.97	28-42	
7	0.3	2177.34	19.99	87.03	12.97	7-21	
8	0.075	986.15	9.06	96.08	3.92	2-8	

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Stability of Mix

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Sample No	1
Tested Date	6-Apr-2023

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	9.6	9 KN (min)
2	Marshal Flow	mm	4.1	2 – 5 mm
3	Percent of Air Voids in mix	%	4.3	3 - 6
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	69	65 – 75 %
5	Density	g/cc	2.3	-

Note:

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ii. The results relate only to the items tested.
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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Stability of Mix

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Sample No	2
Tested Date	6-Apr-2023

Sl. No.	Description	Unit	Test 2	Requirements as per MORT&H
1	Marshal Stability	KN	9.3	9 KN (min)
2	Marshal Flow	mm	3.6	2 – 5 mm
3	Percent of Air Voids in mix	%	3.1	3 - 6
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	72	65 – 75 %
5	Density	g/cc	2.3	-

Note:

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For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited MECADEZ

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Sample No	1
Tested Date	6-Apr-2023

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1725
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	645
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1695
5	Weight of Sample after extraction (i.e. washed aggregates)	gm	$S_a = w_{sa} - Eb$	615
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	3
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	1
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	30
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b + F_d$	31
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	4.81

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	37.5	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Specification for Dense graded biyuminous macadam
2	26.5	38.69	6.29	6.29	93.71	90-100	
3	19	75.36	12.25	18.54	81.46	71-95	
4	13.2	98.46	16.01	34.55	65.45	56-80	
5	4.75	85.11	13.84	48.39	51.61	38-54	
6	2.36	109.54	17.81	66.20	33.80	28-42	
7	0.3	116.7	18.98	85.18	14.82	7-21	
8	0.075	60.17	9.78	94.96	5.04	2-8	

For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Dense Graded Bituminous Macadam (DBM)
Contractor	M/s SMLP Aspahalts
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Laboratory
Sample No	2
Tested Date	6-Apr-2023

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1764
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	684
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1734
5	Weight of Sample after extraction (i.e. washed aggregates)	gm	$S_a = w_{sa} - Eb$	654
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	3
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	1
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	30
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b + F_d$	31
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	4.53

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	37.5	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Specification for Dense graded biyuminous macadam
2	26.5	36.17	5.53	5.53	94.47	90-100	
3	19	64.08	9.80	15.33	84.67	71-95	
4	13.2	103.65	15.85	31.18	68.82	56-80	
5	4.75	124.81	19.08	50.26	49.74	38-54	
6	2.36	107.66	16.46	66.72	33.28	28-42	
7	0.3	99.92	15.28	82.00	18.00	7-21	
8	0.075	80.29	12.28	94.28	5.72	2-8	

For Mecadez Core Technologies Private Limited

Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Mecadez Core Technologies Private Limited

Project Management Consultancy Services

Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: **Package No.06 Consists of 14 Works**

Job No: **MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR**

Contractor **M/s SMLP Aspahalts**

Sl. No	Particulars of the Tests	Plain Cement Concrete (1:3:6)			
		Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
I	**Cement**	18.32	OPC 43 Grade		
1	Consistency test		1Test / Source of Supply	1	1
2	Fineness test		1Test / Source of Supply	1	1
3	Soundness test		1Test / Source of Supply	1	1
4	Compressive strength test				
i	7-days		1Test / Source of Supply	1	1
ii	28-days		1Test / Source of Supply	1	1
II	**Fine Aggregates**				
5	Gradation test		1Test / Day	1	1
III	**Coarse aggregates**				
6	Gradation test		1Test / Day	1	1
7	Water absorption test		Regular Intervals	1	1
8	Impact test		1Test / Source of Supply	1	1

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900.

Mecadez Core Technologies Private Limited

Consultant

Contractor

ASSISTANT ENGINEER

ASSISTANT EXE ENGINEER

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Mecadez Core Technologies Private Limited

Project Management Consultancy Services

Summary of Frequencies of Field Tests and Lab Tests Conducted

Name of the work: **Package No.06 Consists of 14 Works**

Job No: **MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR**

Contractor **M/s SMLP Aspahalts**

Sl. No	Particulars of the Tests	Quantity Cum	Frequency of Tests	Tests Required	Tests Carried Out
1	Rate of Spread of Prime Coat		3 Test / Day	3	3

Note: Frequency of tests as per Specifications MORT&H, V Revision, Section 900.

Mecadez Core Technologies Private Limited

Consultant

Contractor

ASSISTANT ENGINEER

ASSISTANT EXE ENGINEER

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Test Report
Rate of Spread of Prime Coat

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Contractor	M/s SMLP Aspahalts
Location	At Site
Material	Emulsion (Prime Coat)
Sample No	1
Tested Date	5-Apr-2023

Sl. No.	Determination	Unit	Test No 1		
			Longitudinal Distribution		
1	Size of Plate (mxn)	m^2	0.2x0.2	0.2x0.2	0.2x0.2
2	Area of the Plate (a)	m^2	0.04	0.04	0.04
3	Initial weight of the empty Plate (b)	kg	1.639	1.639	1.639
4	Final weight of plate after application of Tack Coat (c)	kg	1.665	1.664	1.664
5	Weight of Prime coat/ Tack Coat (d = c-b)	kg	0.026	0.025	0.025
6	Rate of spread (d/a)	kg / m^2	0.650	0.625	0.625
7	Average	kg / m^2	0.633		
8	Specified Limit	kg / m^2	Not less than 0.6 kg / m^2		

Results: Rate of Spread of Prime Coat is: 0.633 kg / m2

Note:

i. The results indicated above are based on the tests carried out on the sample at site.
ii. The results relate only to the items tested.
iii. This test report should not be reproduced except in full, without written approval of this laboratory.
iv. Any query regarding the report must be reported immediately.

For Mecadez Core Technologies Private Limited

Authorised Signature

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Mecadez Core Technologies Private Limited
Temperature Record Log Sheet

Project Name Package No.06 Consists of 14 Works

Client Excecutive Engineer - Byatarayanapura Division

Job No MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR

Mix Type Dense Graded Bituminous Macadam(DBM)

Contractor M/s SMLP Aspahalts

Date: 6-Apr-2023

Sl No	Tipper No	Time	Cleaning of the Surface	Application of Tackcoat	Mix Laying Temperature (C^0)	Mix Rolling Temperature (C^0)	Depth of the Mix Before Rolling (mm)	Depth of the Mix After Rolling (mm)	Remarks
1	KA51 BD 7010	6:35AM	Yes	Yes	142.6	90.9	67	50	
2	KA2 BY 7282	7:00AM	Yes	Yes	145.6	92.5	66	50	
3	KA05 AB 412	7:32AM	Yes	Yes	140.3	91.6	65	50	

Consultant

Asst Engineer

Asst.Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Mecadez Core Technologies Private Limited
Temperature Record Log Sheet

Project Name	Package No.06 Consists of 14 Works
Client	Excecutive Engineer - Byatarayanapura Division
Job No	MCTPL/BBMP/EE/BTP/PMC/W-11/P-3877/2022-23/QR
Mix Type	Bituminous Concrete (BC)
Contractor	M/s SMLP Aspahalts
Date:	7-Apr-2023

Sl No	Tipper No	Time	Cleaning of the Surface	Application of Tackcoat	Mix Laying Temperature (C^0)	Mix Rolling Temperature (C^0)	Depth of the Mix Before Rolling (mm)	Depth of the Mix After Rolling (mm)	Remarks
1	KA51 BD 7010	8:10AM	Yes	Yes	142.5	90.2	53	40	
2	KA02 BY 7282	8:40AM	Yes	Yes	141.8	90.5	53	40	
3	KA05 AB 412	9:10AM	Yes	Yes	140.5	92.6	54	40	
4	KA51 BD 7010	9:40AM	Yes	Yes	145.9	93.5	54	40	
5	KA02 BY 7282	10:00AM	Yes	Yes	146.3	94.2	54	40	

Consultant

Mecadez Core Technologies Private Limited MECADEZ

Asst. Engineer

Asst.Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore